joints, the frequent alternation of thick and thin joints in the stem, and the small size of its arms.

The larger specimen, figured on Pl. XLVI., appears to have met with an accident since it was drawn, for it came into my hands in the dry state, having lost its stem and basal ring. The characters of the rays and arms, however, are so essentially similar to those of the smaller individual that I have no hesitation in regarding the two as identical. The characters of the stem as a whole come nearest to those of *Metacrinus cingulatus* (compare Pl. XLI. figs. 1–3, and Pl. XLV. figs. 2–6). In both cases there is a continuous horizontal ridge round each of the mature internodal joints, but the articular faces are more lobate in *Metacrinus cingulatus* (Pl. XLI. fig. 3) than in *Metacrinus moseleyi* (Pl. XLV. fig. 2). The same is the case with the nodal joints which have more produced angles and consequently deeper cirrus-sockets in *Metacrinus moseleyi* than in the larger species. The characters of the cup, however, are quite different in the two types, that of *Metacrinus cingulatus* being extremely regular in the number of its radials, while in *Metacrinus moseleyi* there may be as few as three or as many as six. The only other species which resembles it in this respect is the large *Metacrinus rotundus*[1] from Japan, which has a smooth stem, with much longer internodes. The ten rays of the two individuals of *Metacrinus moseleyi* are constructed as follows :—

* One of three joints, the second and the axillary both syzygies.
* One of four joints, the second and the axillary both syzygies.
Three of five joints, the second a syzygy.
Two of five joints, the second and fourth syzygies.
One of six joints, the second a syzygy.
Two of six joints, the second and fourth syzygies.

The number of primitive joints in the ray, therefore, before the union of one or more pairs by syzygy, varies from five to eight, just as in other species of *Metacrinus*. The irregularity which distinguishes *Metacrinus moseleyi* thus lies rather in the mode of union of the primitive joints to form syzygial pairs than in any excess or defect of their number; though as a general rule there are either five (*Metacrinus angulatus*) or eight (*Metacrinus wyvillii*), and not both types in the same individual.

Two very anomalous instances which occur in the dry specimen are marked with an asterisk in the above list. In the first case the five primitive radials have become reduced to three, owing to the union of the last four into two syzygial pairs. In *Metacrinus angulatus* (Pl. XXXIX. fig. 1) the fourth primitive joint remains distinct from the axillary to which it is united by muscles, and bears the second pinnule. But on this abnormal ray of *Metacrinus moseleyi* these two joints are united by syzygy, and as the hypozygal of a syzygy never bears a pinnule, the natural condition would have

[1] See *Trans. Linn. Soc. Lond.* (Zool.), ser. 2, vol. ii. p. 437.